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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/912,477

07/26/2001

Peter Kofink

3826 701

5126

7590

02/27/2003

Dreiss, Fuhlendorf, Steimle & Becker
Postfach 10 37 62
Stuttgart, D-70032
GERMANY

EXAMINER

COHEN, AMY R

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/912,477

Applicant(s)

KOFINK ET AL.

Examiner

Amy R Cohen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the code disc comprising a projection (claim 17) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Double Patenting

2. Claim 20 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 19. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The carrier claimed in claim 19 is substantially the same as the casing claimed in claim 20.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 16-²⁷ are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (U. S. Patent No. 5,802,924) in view of Sano (U. S. Patent No. 6,272,912).

Johnson et al. discloses a steering column module (10) for vehicles having a steering wheel (Col 1, lines 63-65) cooperating with a steering column (12), the steering column borne for rotation within a stationary tubular jacket (18), the steering column module comprising: a first switch member (14) mounted to the tubular jacket; comprising at least one additional switch member (24, 26) mounted to said first switch member in a modular manner (Fig. 1).

Johnson et al. does not disclose a steering column comprising a rotatable signal case, a code disc, a stationary steering angle module, a steering angle sensor, a carrier, a casing, a bearing piece, a scanning device, and evaluation electronics.

Sano discloses a steering column module (1) for vehicles comprising a rotatable signal case component (25) cooperating with a steering column for secure mutual rotation therewith; a code disc (22) cooperating with said rotatable signal case component for secure mutual rotation therewith; a stationary steering angle module (18); and a steering angle sensor (16) cooperating with said steering angle module and communication with said code disc to measure a steering angle of the steering column (Col 9, line 63-Col 10, line 3).

Sano discloses a steering column wherein said code disc comprises a projection (17f), extending in a first direction substantially parallel to a longitudinal extension of the steering column (Fig. 1), which engages an associated recess (22b), extending in a second direction substantially transverse to said extension of said steering column (Fig. 1), in said rotatable case component (25).

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Sano teaches a steering column wherein said rotatable case component (25) comprises a projection (17f), extending in a first direction substantially parallel to a longitudinal extension of the steering column (Fig. 1), which engages an associated recess (22b), extending in a second direction substantially transverse to said extension of said steering column (Fig. 1), in said code disc (Fig. 1).

Sano discloses a steering column wherein said steering angle module comprises a carrier/casing (18) within which said code disc is radially secured and rotatably disposed.

Sano discloses a steering column wherein said steering angle module comprises a bearing piece (17) having a bearing ring (17e, 26) in which said code disc is disposed (Fig. 8).

Sano discloses a steering column wherein said steering angle module comprises a carrier bearing a scanning device (21) for scanning said code disc (Col 10, lines 35-48).

Sano discloses a steering column wherein said code disc has a rotary angle encoding (22a) disposed on an end face thereof.

Sano discloses a steering column wherein said code disc has holes (22a) constituting rotary angle encoding disposed on an outer surface thereof (Fig. 1).

Sano discloses a steering column comprising an evaluation (Col 12, line 60-Col 13, line 25) electronics mounted in said steering angle module to communicate with said steering angle sensor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the steering column of Johnson et al., to include a rotatable signal case, a code disc, a stationary steering angle module, a steering angle sensor, a carrier, a casing, a bearing piece, a scanning device, and evaluation electronics, as taught by Sano, so that a user

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could accurately determine the amount of steering in a steering column and so that the switch members would be electronically connected to the angle modules and sensors.

Response to Arguments

5. Applicant's arguments with respect to claim 16-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents disclose steering column and angle sensors Kofink et al. (U. S. Patent No. 6,158,132), Sano (U. S. Patent No. 6,155,106), Nishitani et al. (U. S. Patent No. 6,151,980), Nakaho (U. S. Patent No. 5,855,072), Feichtinger et al. (U. S. Patent No. 5,758,427), and Oshita et al. (U. S. Patent No. 5,065,324).

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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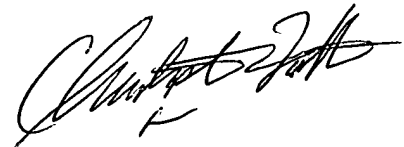
however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy R Cohen whose telephone number is (703) 305-4972. The examiner can normally be reached on 8 am - 5 pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (703) 308-3875. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

ARC
February 19, 2003



Diego Gutierrez
Supervisory Examiner
Tech Center 2800

**CHRISTOPHER W. FULTON
PRIMARY EXAMINER**